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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,154	01/28/2004	Dsun-Chie Twu	TOP 353	2147
23995 7590 04/30/2008 RABIN & Berdo, PC 1101 14TH STREET, NW SUITE 500 WASHINGTON, DC 20005				
EXAMINER				
GUARINO, RAHEL				
ART UNIT		PAPER NUMBER		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/765,154

Applicant(s)

TWU ET AL.

Examiner

Rahel Guarino

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Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6-10, 25-34, 37, 38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 30-34, 37, 38 is/are allowed.
- 6) ☒ Claim(s) 6-10 and 25-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/06)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Examiner regrets there was a typographical error in the PTOL-326 which states claim 6 is objected. However, the claim was rejected under 103 over Omura et al (US 5,157,686) in view of Norden et al. (WO 96/32784) in the office action. Only claim 36 is objected.

1. This office action is in response to communication filed on 01/29/2008. Claims 6-10, 25-34, 37, 38 are pending on this application. Claims 1-5, 11-24, 35, 36 have been cancelled.

Response to Arguments

2. Applicant's arguments filed 01/29/2008 have been fully considered but they are not persuasive.

Applicant's argument:

Encoding after spreading is not suggested by either reference. Omura's Figure 1A shows encoding by a Manchester generator 112 and then spreading by a chip code device 113, exactly the opposite in order compared with claims 6 and 25. It should be noted that Omura's RF modulator 115 serves to modulate the output from Omura's inverting device 114 onto a carrier signal for the purpose of RF transmission, but without any encoding connotation. Similarly, Norden does not suggest encoding after spreading.

Accordingly, it is respectfully submitted that independent claims 6 and 25 would not have been obvious, to an ordinarily skilled person, from the Omura and Norden references.

Examiner's answer:

3. Applicant should submit an argument under the heading "Remarks" pointing out disagreements with the examiner's contentions. Applicant must also discuss the references applied against the claims, explaining how the claims avoid the references or distinguish from them.

Applicant has spreader and encoder as well as Omura. Therefore, the arrangement of part is not patentable over the prior art (see MPEP 2144.04c).

2144.04C. Rearrangement of Parts

In re Japikse, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950) (Claims to a hydraulic power press which read on the prior art except with regard to the position of the starting switch were held unpatentable because shifting the position of the starting switch would not have modified the operation of the device.); In re Kuhle, 526 F.2d 553, 188 USPQ 7 (CCPA 1975) (the particular placement of a contact in a conductivity measuring device was held to be an obvious matter of design choice). However, "The mere fact that a worker in the art could rearrange the parts of the reference device to meet the terms of the claims on appeal is not by itself sufficient to support a finding of obviousness. The prior art must provide a motivation or reason for the worker in the art, without the benefit of appellant's specification, to make the necessary changes in the reference device." Ex parte Chicago Rawhide Mfg. Co., 223 USPQ 351, 353 (Bd. Pat. App. & Inter. 1984)

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 6-8, 10, 25-27, 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Omura et al. US 5,157,686 in view of Norden et al. (WO 96/32784).**

Re claim 6, Omura discloses a method for encoding a data signal (fig.1a), comprising the steps of:
spreading the data signal with a spreading code (fig.1a (113)) to generate a transmission signal (spread spectrum signal), wherein the transmission signal corresponds to the data signal col. 9 lines 3-20); and encoding the transmission signal (fig.1a (115)) into an output transmission signal to be transmitted through a communications medium to a receiver (col. 11 lines 1-3), wherein the output transmission signal contains bits (fig.4), the value of each bit is either a first value or a second value (fig.4 either C(0) or C(1))), and the number of bits with the first value is equal to the number of bits with the second value (col. 9 lines 8-17) in

the output transmission, Omura does not disclose wherein the output transmission signal is a DC-balanced signal.

However, Norden discloses wherein the output transmission signal is a DC-balanced signal.

Therefore, taking the combined teaching of Omura and Norden as a whole would have been rendered obvious to one skilled in the art to modify Omura to utilize DC-balanced output signal for the benefit of reducing any phase errors at the transmission.

Re claim 7, the modified invention as claimed in claim 6, wherein the Manchester Code is used to encode the data signal (col. 7 lines 10-19 and fig.2 shows the Manchester encoded bits,"Omura").

Re claim 8, the modified invention as claimed in claim 6, wherein the encoded data signal comprises the data signal and an inversion of the data signal (col. 9 lines 13-20,"Omura").

Re claim 10, the modified invention as claimed in claim 6, wherein each bit in the data signal corresponds to two bits in the encoded data signal exclusively (col. 7 lines 10-19 and fig. 2,"Omura").

Re claim 25, Omura discloses a method for encoding a data signal (fig.1a), comprising:
a spreading coder generator the data signal (fig.1a (113)) for outputting a spreading code (chip code); a spreader (fig. 1a (112)) coupling to the spreading code generator (fig. 1 (113)) and the encoder; and for spreading the encoded data signal according to the spreading code and outputting transmission signal to

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be transmitted (col. 7 lines 22-48, the Manchester coded bits are modulated by the RF modulator (fig.1a (115)) through a communications medium to a receiver (col. 11 lines 1-3), wherein the output transmission signal contains bits (fig.4), the value of each bit is either a first value or a second value (fig.4 either C(0) or C(1))), and the number of bits with the first value is equal to the number of bits with the second value (col. 9 lines 8-17) in the output transmission, Omura does not disclose wherein the output transmission signal is a DC-balanced signal.

However, Norden discloses wherein the output transmission signal is a DC-balanced signal.

Therefore, taking the combined teaching of Omura and Norden as a whole would have been rendered obvious to one skilled in the art to modify Omura to utilize DC-balanced output signal for the benefit of reducing any phase errors at the transmission.

Re claim 26, the modified invention as claimed in claim 25, wherein the Manchester Code is used to encode the data signal (col. 7 lines 10-19 and fig.2 shows the Manchester encoded bits,"Omura").

Re claim 27, the modified invention as claimed in claim 25, wherein the encoded data signal comprises the data signal and an inversion of the data signal (col. 9 lines 13-20,"Omura").

Re claim 29, the modified invention as claimed in claim 25, wherein each bit in the data signal corresponds to two bits in the encoded data signal exclusively (col. 7 lines 10-19 and fig. 2,"Omura").

6. **Claims 9,28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Omura et al. US 5,157,686 in view of Norden et al. (WO 96/32784) in further view Grau et al. US 5,077,753.**

Re claim 9, the modified invention as claimed in claim 6, does not teach wherein the encoded data signal comprises the data signal and a reversed inversion of the data signal.

However, Grau discloses the encoded data signal comprises the data signal and a reversed inversion of the data signal (col. 3 lines 14-22).

Therefore, taking the combined teaching of Grau, Omura and Norden as a whole would have been rendered obvious to one skilled in the art to modify Omura and Norden to utilize a reversed inversion of the radio signal for the benefit of better coding.

Re claim 28, the modified invention as claimed in claim 25, does not teach wherein the encoded data signal comprises the data signal and a reversed inversion of the data signal.

However, Grau discloses the encoded data signal comprises the data signal and a reversed inversion of the data signal (col. 3 lines 14-22).

Therefore, taking the combined teaching of Grau, Omura and Norden as a whole would have been rendered obvious to one skilled in the art to modify Omura and Norden to utilize a reversed inversion of the radio signal for the benefit of better coding.

Allowable Subject Matter

7. Claims 30-34, 37 and 38 are allowed.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rahel Guarino whose telephone number is 571-270-1198. The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Payne David can be reached on 571-272-3024. The fax

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phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RG

**/David C. Payne/
Supervisory Patent Examiner, Art Unit 2611**